Claims:

1. A fluid pumping system comprising:

a pair of substantially counter synchronous fluid pumps;

a power fluid circuit for providing power fluid to and from the pair of fluid pumps;

an indexing circuit for regulating the fluid in the power fluid circuit, whereby the indexing circuit ensures that the pair of fluid pumps remain in substantially counter synchronous operation; and

a trim circuit for providing fluid to the indexing circuit.

2. The fluid pumping system of claim 1, wherein the pair of substantially counter synchronous fluid pumps are a pair of plungers, each plunger movable between an extended position and a retracted position.

3. The fluid pumping system of claim 2, wherein at least one plunger is moved by a fluid operated cylinder.

4. The fluid pumping system of claim 1, further including a rapid reversal circuit to control the rate and direction of the pair of counter synchronous fluid pumps.

5. The fluid pump system of claim 4, wherein the rapid reversal circuit includes at least one poppet valve.

6. The fluid pumping system of claim 1, wherein the indexing circuit further includes an acceleration valve in selective communication with the power fluid circuit and the indexing circuit.

7. The fluid pumping system of claim 6, wherein the acceleration valve is constructed and arranged to selectively redirect fluid from the fluid power circuit to the indexing circuit as the fluid pumping system completes a cycle and one of the fluid pumps moves from the extended position to the retracted position.

8. The fluid pumping system of claim 1, further including a charge circuit for providing fluid to the power fluid circuit and the indexing circuit.

9. The fluid pumping system of claim 8, wherein the charge circuit includes at least one pressure sensing member for introducing fluid into the power fluid circuit or the indexing circuit when the pressure in any one or more circuits falls below the charge circuit pressure.

10. The fluid pumping system of claim 9, further including at least one biasing member for biasing one of the fluid pumps as the fluid pump moves from the retracted position.

11. The fluid pumping system of claim 10, wherein the biasing member urges the fluid pump towards the extended position, thereby lowering a pressure in the indexing circuit below a pressure in the charge circuit, thereby causing the charge circuit to introduce fluid to the indexing circuit.

12. The fluid pumping system of claim 11, whereby the introduced fluid entering the indexing circuit urges one of the fluid pumps towards the extended position, thereby causing the fluid pump to reach its full extended position prior to the other fluid pump reaching its retracted position.

13. The fluid pumping system of claim 8, wherein the power fluid circuit further includes a valve member and an accumulator for ensuring adequate fluid in the power fluid circuit.

14. The fluid pumping system of claim 13, wherein the accumulator stores fluid from the charge circuit and the valve member is arranged between the accumulator and the power fluid circuit to permit fluid introduction to the power fluid circuit in the event that fluid pressure in the circuit falls below a preset valve.

15. The fluid pumping system of claim 3, wherein the power fluid circuit further includes a pump, a signal box and at least one pair of limit switches for controlling the direction of fluid in the circuit.

16. The fluid pumping system of claim 15, wherein the pair of limit switches are constructed and arranged to trigger the signal box upon arrival of one of the fluid pumps at the retracted position, thereby causing the pump to redirect the flow of fluid in the power fluid circuit.

17. The fluid pumping system of claim 15, whereby the pair of limit switches is adjustable to determine the retracted position of the fluid pump.

18. A method for pumping a fluidstream comprising:

operating a pump system including:

a pair of substantially counter synchronous fluid pumps;

a fluid power circuit for providing fluid to and from the pair of fluid pumps;

an indexing circuit providing fluid to and from the fluid power circuit; and

a trim circuit for providing fluid to the indexing circuit; and

biasing one of the fluid pumps as the fluid pump moves from the retracted position toward the extended position.

19. The method of claim 18, wherein biasing one of the fluid pumps as the fluid pump moves from the retracted position towards the extended position includes lowering a pressure in the indexing circuit below a pressure in the charge circuit to cause the charge circuit to introduce fluid to the indexing circuit resulting in the fluid pump reaching its full extended position prior to the other fluid pump reaching its retracted position.